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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Torgny Palenius

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POTOMAC PATENT GROUP, PLLC

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EXAMINER

LEE, CHI HO A

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/525,898

Applicant(s)

PALENIUS, TORGNY

Examiner

Andrew Lee

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4-14 and 17-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4-7, 9-14 and 17-31 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

ANDREW C. LEE
PRIMARY PATENT EXAMINER

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 4, 12, 17, 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, line 3, recites, "at least one code is never used for transmitting signals".

If the code is never used, how can the receiver "estimate said interference...using said...code". "signals" should be further defined.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 2, 4-7, 12-14, 17-24, 27-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Wichman et al U.S. Patent Number 6,665,334.

Re Claim 2, fig. 3 discloses a receiver for receiving a composite signal comprising a desired signal and plurality of interfering signals each associated with a predetermined code (reserving at least one code) whereby the Estimation of Active

Art Unit: 2616

codes 310 (a processor) in combination with 312 performs interference estimation for the receiver using the active codes (See col. 5, lines 8-45).

Re Claims 4, 6, 18, 24, 29, refer to Claim 2, wherein BTS broadcasts code information to the receiver consistent is the CDMA signaling standard.

Re Claim 5, refer to Claim 2, wherein fig. 3 has a CDMA air interface for disspreading the composite signal using active codes (one channelization code).

Re Claim 7, refer to Claim 5, wherein the desired signal is associated with the traffic channel and channelization code.

Re Claims 12, 13, fig. 3 includes a Memory 314 (terminal memory) for storing the codes.

Re Claim 14, refer to Claim 5, wherein the receiver not only receives a desired signal (data traffic) but also interfering signals (received signal does not contain data) whereby the interfering signals are spreaded by predetermined codes.

Re Claim 17, refer to Claim 2, wherein the code is reserved for the MS within the cell of BTS 100 (See fig. 1).

Re Claim 19, refer to Claim 2, 310 performs disspreading of the composite signal using the active codes (at least one code) wherein the active codes includes the code used in the interfering signals with respect to other stations.

Re Claim 20, refer to Claim 5, wherein when the receiver despread the interfering signal associated with code (using the reserved code), the result contains only the interference with respect to the receiver of fig. 3.

Re Claim 21, refer to Claim 2, wherein the reserved codes are the codes used in spreading the interfering signals wherein the interfering signals does not contain the desired signal (not to encode signals from transmission).

Re Claims 22, 23, 27, 28 refer to Claim 2, wherein the code associated with the desired signal is the first spreading code to be despread by the receiver to retrieve the transmitted signal and the codes associated with the interfering signals are the second spreading code for estimating interference at the receiver and not representing data stream.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 25, 26, 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wichman et al U.S. Patent Number 6,665,334.

Re Claims 25, 26 30, 31, Wichman fails to explicitly teach using the OVSP code selected from a code tree. However, one skilled in the art would have been motivated to use codes with good correlation properties. This includes codes such as OVSP code. Therefore, it would have been obvious to one ordinary skilled to use known codes in the CDMA system of Wichman.

Allowable Subject Matter

7. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with Claims 5, 7, 8, prior art fails to teach the code being selected based upon a desired user bit rate for the connection.

Response to Arguments

8. Applicant's arguments filed 12/14/05 have been fully considered but they are not persuasive.

Re 112 of claims 2, 4, 12, 17, and 19, Applicant argues that "signals" does not need to be defined because it is well understood in the art that "when sending a signal, the base station has multiplied a signal with a spreading code...".

Claims above require that "the reserved code...never used for transmitting signals". It is unclear how the receiver despread the "reserved code" when the it is "never used in transmitting signals". Clearly, "the reserved code" when transmitted is a signal.

Re 102 claims, applicant argues that "reserving at least one code in a set of codes only for interference measurement only, and then using that reserved code to estimate interference in the composite signal".

Art Unit: 2616

Wichman et al teaches that memory 314 in mobile stores predetermined codes used by the base station. The codes in 314 are the “reserving at least one code”. 310 and 312 collectively performs interference cancellation. In order to perform interference cancellation, the interference associated with codes in memory 314 must be known or estimated.

Applicant further argues, “Wichman et al relies only on codes that are used for transmitting signals”. Furthermore, that the claimed subject matter defines “reserved code” as “is never used for transmitting signals”. It is appears that the applicant is referring that the “signals” does not include traffic bearing. However, as claim does not exclude the use of codes as found in Wichman et al.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2616

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 571-272-3130. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy Lee
Primary Examiner
2/28/06

ANDREW C. LEE
PRIMARY PATENT EXAMINER

